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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/083,608

02/27/2002

Hiroo Yabe

020251

1778

23850

7590

10/28/2003

ARMSTRONG, KRATZ, QUINTOS, HANSON & BROOKS, LLP  
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WASHINGTON, DC 20006

EXAMINER

STERRETT, JEFFREY L

ART UNIT

PAPER NUMBER

2838

DATE MAILED: 10/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.



UNITED STATES DEPARTMENT OF COMMERCE  
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GR

APPLICATION NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO.
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083,608

EXAMINER
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ART UNIT	PAPER NUMBER
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DATE MAILED:

This is a communication from the examiner in charge of your application.  
COMMISSIONER OF PATENTS AND TRADEMARKS

OFFICE ACTION SUMMARY

☒ Responsive to communication(s) filed on 10/7/03

☒ This action is FINAL.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 D.C. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

- ☒ Claim(s) 1-10 is/are pending in the application.  
Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
☐ Claim(s) \_\_\_\_\_ is/are allowed.  
☒ Claim(s) 1-10 is/are rejected.  
☐ Claim(s) \_\_\_\_\_ is/are objected to.  
☐ Claim(s) \_\_\_\_\_ are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.  
☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.  
☒ The proposed drawing correction, filed on 10/7/03 is ☒ approved ☐ disapproved.  
☐ The specification is objected to by the Examiner.  
☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).  
☐ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been  
☐ received.  
☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_  
☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

- ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- ☐ Notice of Reference Cited, PTO-892  
☐ Information Disclosure Statement(s), PTO-1449, Paper No(s) \_\_\_\_\_  
☐ Interview Summary, PTO-413  
☐ Notice of Draftsperson's Patent Drawing Review, PTO-948  
☐ Notice of Informal Patent Application, PTO-152

--SEE OFFICE ACTION ON THE FOLLOWING PAGES--

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1. The proposed drawing correction and/or the proposed substitute sheets of drawings, filed on October 7, 2003 have been approved. A proper drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The correction to the drawings will not be held in abeyance.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1-7 and 10 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Schmidt et al (US 5,550,702).

Schmidt et al discloses load drive circuit comprising a power MOSFET (M1) connected between a load (LOAD) and a power source (Vin) that incorporates a thermoelectric element (Ts1) and a control means (the rest of the circuitry in figure 5, 7, or 8).

4. Claim 8 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Schmidt et al.

Schmidt et al teaches a load drive-control circuit as recited by claim 8 except for utilizing a diode as the generically taught thermoelectric element. Official notice is taken that utilizing a diode as a thermoelectric element was an old and known expedient in the art at the time of the invention. It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the load drive-control circuit of Schmidt et al by utilizing a diode as

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the generically taught thermoelectric element since doing so was an old and known expedient in the art at the time of the invention.

5. Claim 9 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Schmidt et al in combination with Hastings et al (US 6,356,423).

Schmidt et al teaches a load drive-control circuit as recited by claim 9 except for utilizing a plurality of load drive-control circuits to control a plurality of loads. Utilizing a plurality of load drive-control circuits to control a plurality of loads was an old and known expedient in the art at the time of the invention as taught by Hastings et al. It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the load drive-control circuit of Schmidt et al by utilizing a plurality of load drive-control circuits to control a plurality of loads since doing so was an old and known expedient in the art at the time of the invention as taught by Hastings et al.

6. Applicant's arguments filed October 7, 2003 have been fully considered but they are not persuasive.

In response to the remarks concerning the recitation of a thermoelectric element, applicant is mistaken in the belief that the examiner somehow specifically identified resistor R1 of Schmidt et al as the thermoelectric element. As correctly set forth above in paragraph 3 the claim limitation "thermoelectric element" was interpreted as being met by box Ts1 of Schmidt et al labeled

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“thermal sensor”. The examiner apparently was in error thinking that this was made clear by the very nature of the existence of a thermal sensor in the circuitry of Schmidt et al and by the fact that the elements of particular interest were circled in the figure on the front page of the reference supplied to applicant. It is further noted that resistor R1 is **NOT** circled in this figure, or any figure as a matter of fact, as being of interest. Although the first mention of resistor R1 may be underlined in line 34 of column 4 of Schmidt et al, the first mention of thermal sensor is likewise underlined in lines 35-36 of column 5 of Schmidt et al. Thus both from the indications of pertinent circuitry elements by encirclement of reference characters and the interpretation abilities expected of one of ordinary skill in the art, it was clear that thermal sensor Ts1 of Schmidt et al was intended to have been read upon the claim limitation of a “thermoelectric element”.

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however,

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will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

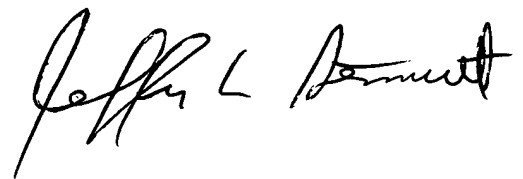
8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey Sterrett whose telephone number is (703) 308-1632. The examiner can normally be reached on Monday through Thursday from 8:00 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Sherry, can be reached on (703) 308-1680. The fax phone number for this Art Unit is (703) 305-7723 and the fax phone number for this Group is (703) 305-3431 or (703) 305-3432.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.

jls

October 23, 2003

A handwritten signature in black ink, appearing to read "Jeffrey L. Sterrett". The signature is fluid and cursive, with the first name "Jeffrey" being more prominent and the last name "Sterrett" following in a similar style.

Jeffrey L. Sterrett

Primary Examiner

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